

# INTRODUCTION TO CAREER CLUSTER PROGRAM MASTERY LEVELS GRID DESIGN

## Introduction

The Office of Career and Technical Preparation (OCTP) continually strives for quality and consistency in **programs**, and support the concept of Career Pathways as a key component of the Michigan Career Preparation System. The National Career Clusters, which are aligned within our Michigan Career Pathways, will serve as the basis for program and curriculum standards in all state-approved Career and Technical Education (CTE) **programs**. These standards are currently used to approve new programs, and will be reviewed during the Technical Review, Assistance, and Compliance (TRAC) on-site review process for all previously approved courses/programs.

The alignment of your **Michigan CTE Programs to the National Career Clusters** should begin by September of 2004 and be **fully implemented by September 2005**.

## Mastery Level Grids

To assist you with the process of curriculum and program review OCTP has developed the Mastery Level Grids. The Mastery Level Grids can be used to identify the National Career Cluster Performance Elements being taught in each course and program. They can also be used as a counseling tool to assist students in their exploration of a career field. During the school year there will be several training sessions to assist teacher in the many uses of these grids.

## Grid Format

On the next page you will find a description of the format used in all of the 16 National Career Cluster Mastery Level Grids, as well as, an explanation of the numbering system.

## Table of Contents

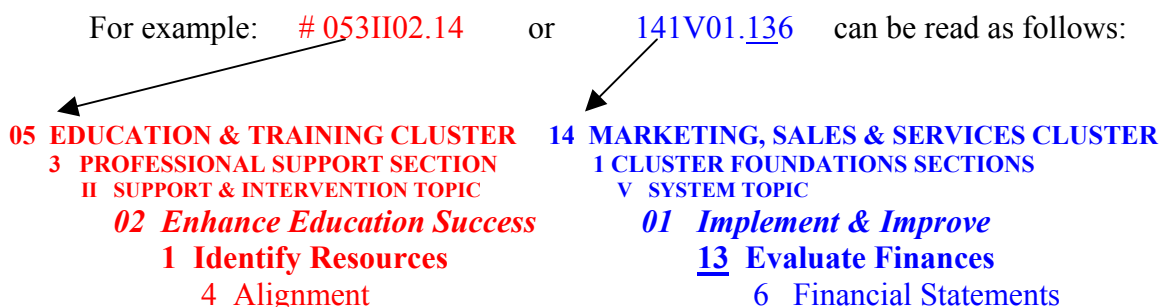
Pages 3, 4 and 5 are the table of contents for each of the National Career Cluster Grids. You should print out these directions to be used whenever you work with the grids.

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- I. The following is a description of the design of the Assessment Grids system:
1. The **Topic** areas are in **bold UPPER CASE** letters and preceded by a Roman numeral in bold (**I**).
  2. The ***Knowledge & Skill Statements*** are in *lower case bold italics* and are preceded by an Arabic numeral without a decimal in **bold (1)**.
  3. The **Performance Elements** are **lower case bold face** and are preceded by an Arabic numeral with at least one decimal place number in **bold (1.1)**.
  4. The Measure Criteria is in lower case and preceded by an Arabic numeral with at least two decimal places numbers not in bold (1.11).
  5. There are five levels of competency:
    - **N** = Not exposed to task,
    - **1** = Exposed to task,
    - **2** = Accomplishes task with help,
    - **3** = Accomplishes task to criteria,
    - **4** = Exceeds criteria and/or able to teach task.
- II. An explanation of the number system used to identify each Career Cluster, Cluster Pathway, Topic Pathway, Knowledge and Skills Statement, Performance Element, and Measurement Criteria is as follows:



- The first two numbers 05 indicates the National Career Cluster numbered in alphabetic order (see pages 2 and 3).
- The next number is the Cluster Pathway or Section number. Number one (1) is always the Career Foundations.
- The next two numbers show the Topic Pathway in a Roman Numeral II.
- *The next two numbers lead you to the Knowledge and Skill Statement within that Topic Pathway.*
- The first number following the decimal point is the number of the Performance Element under the above Knowledge and Skill Statement. If the number is underlined this indicates a Performance element of 10 or above.
- The last number or the last two numbers indicate the Measurement Criteria item.

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<b>01.</b>	<b><u>AGRICULTURE, FOOD AND NATURAL RESOURCES</u></b>	
	1. Cluster Foundations . . . . .	1
	2. Food Products and Processing Systems . . . . .	11
	3. Plant Systems . . . . .	12
	4. Animal Systems . . . . .	13
	5. Power, Structural and Technical Systems . . . . .	15
	6. Natural Resources Systems . . . . .	19
	7. Environmental Service Systems . . . . .	22
	8. Agribusiness Systems . . . . .	26
	9. Leadership Standards . . . . .	27
<b>02.</b>	<b><u>ARCHITECTURE AND CONSTRUCTION</u></b>	
	1. Cluster Foundations . . . . .	1
	2. Design/Pre-Construction . . . . .	7
	3. Construction . . . . .	9
	4. Maintenance/Operations . . . . .	9
<b>03.</b>	<b><u>ARTS, AV TECHNOLOGY AND COMMUNICATIONS</u></b>	
	1. Cluster Foundations . . . . .	1
	2. Audio and Video Technology and Film . . . . .	14
	3. Journalism and Broadcasting . . . . .	16
	4. Performing Arts . . . . .	19
	5. Printing Technology . . . . .	25
	6. Telecommunications . . . . .	27
	7. Visual Arts . . . . .	30
<b>04.</b>	<b><u>BUSINESS MANAGEMENT AND ADMINISTRATION</u></b>	
	1. Cluster Foundations . . . . .	1
	2. Management . . . . .	9
	3. Business Financial Management and Accounting . . . . .	13
	4. Human Resources . . . . .	16
	5. Business Analysis . . . . .	20
	6. Marketing . . . . .	22
	7. Administrative and Information Support . . . . .	29
<b>05.</b>	<b><u>EDUCATION AND TRAINING</u></b>	
	1. Cluster Foundations . . . . .	1
	2. Administration and Administrative Support . . . . .	13
	3. Professional Support Services . . . . .	17
	4. Teaching/Training . . . . .	19
<b>06.</b>	<b><u>FINANCE</u></b>	
	1. Cluster Foundations . . . . .	1
	2. Financial and Investment Planning . . . . .	5
	3. Business Financial Management . . . . .	10
	4. Banking and Related Services . . . . .	12
	5. Insurance Services . . . . .	14

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<b>07.</b>	<b><u>GOVERNMENT AND PUBLIC ADMINISTRATION</u></b>	
	1. Cluster Foundations . . . . .	1
	2. Governance . . . . .	4
	3. National Security . . . . .	5
	4. Foreign Service . . . . .	6
	5. Planning . . . . .	7
	6. Revenue and Taxation . . . . .	8
	7. Regulation . . . . .	9
	8. Public Management and Administration . . . . .	9
<b>08.</b>	<b><u>HEALTH SCIENCES</u></b>	
	1. Cluster Foundations . . . . .	1
	2. Therapeutic Services . . . . .	5
	3. Diagnostics Services . . . . .	6
	4. Health Informatics . . . . .	9
	5. Support Services . . . . .	10
	6. Biotechnology Research and Development	
<b>09.</b>	<b><u>HOSPITALITY AND TOURISM</u></b>	
	1. Cluster Foundations . . . . .	1
	2. Restaurant and Food/Beverage Services . . . . .	8
	3. Lodging . . . . .	11
	4. Travel and Tourism . . . . .	15
<b>10.</b>	<b><u>HUMAN SERVICES</u></b>	
	1. Cluster Foundations . . . . .	1
	2. Early Childhood Development and Services . . . . .	3
	3. Counseling and Mental Health Services . . . . .	6
	4. Family and Community Services . . . . .	9
	5. Personal Care Services . . . . .	11
	6. Consumer Services . . . . .	14
<b>11.</b>	<b><u>INFORMATION TECHNOLOGY</u></b>	
	1. Cluster Foundations . . . . .	1
	2. Network Systems . . . . .	15
	3. Information Support and Services . . . . .	20
	4. Interactive Media . . . . .	25
	5. Programming and Software Development . . . . .	29

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<b>12.</b>	<b><u>LAW, PUBLIC SAFETY AND SECURITY</u></b>	
	1. Cluster Foundations . . . . .	1
	2. Correction Services . . . . .	7
	3. Emergency and Fire Management Services . . . .	14
	4. Security and Protective Services . . . . .	17
	5. Law Enforcement Services . . . . .	27
	6. Legal Services . . . . .	38
<b>13.</b>	<b><u>MANUFACTURING</u></b>	
	1. Cluster Foundations . . . . .	1
	2. Manufacturing Production Process Development .	8
	3. Production . . . . .	14
	4. Maintenance Installation and Repair . . . . .	19
	5. Quality Assurance . . . . .	24
	6. Logistics and Inventory Control . . . . .	29
	7. Health, Safety and Environment Assurance . . . .	31
<b>14.</b>	<b><u>MARKETING, SALES AND SERVICES</u></b>	
	1. Cluster Foundations . . . . .	1
	2. Management and Entrepreneurship . . . . .	11
	3. Professional Sales and Marketing . . . . .	14
	4. Buying and Merchandising . . . . .	16
	5. Marketing Communication and Promotion . . . .	20
	6. Marketing Information Management and Research	24
	7. Distribution and Logistics . . . . .	28
	8. E-Marketing . . . . .	32
<b>15.</b>	<b><u>SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS</u></b>	
	1. Cluster Foundations . . . . .	1
	2. Engineering and Technology . . . . .	4
	3. Science and Mathematics . . . . .	8
<b>16.</b>	<b><u>TRANSPORTATION, DISTRIBUTION AND LOGISTICS</u></b>	
	1. Cluster Foundations . . . . .	1
	2. Transportation Operations . . . . .	9
	3. Logistics Planning and Management Services . . . .	10
	4. Warehousing and Distribution Center Operation . .	13
	5. Facility and Mobile Equipment Maintenance . . . .	15
	6. Transportation Systems/Infrastructure Planning, Management, and Regulation . . . . .	16
	7. Health, Safety and Environmental Management . . .	17
	8. Sales and Services . . . . .	18